The purpose of this study was to evaluate the antimicrobial activity of two experimental pastes containing propolis associated with zinc oxide eugenol (ZOEP) and propolis associated with zinc oxide (ZOP) against polymicrobial in necrotic primary molars root canals. Polymicrobial cultures collected from necrotic primary molar root canals 5 children who need root canal treatment. The bacteria were grown in Brain Hearth Infusion Broth (BHIB), and inoculated into Muller Hinton Agar (MHA) media. Each of the 5 agar plates was divided into 3 sectors, each drilled with sterilized holler pipe. The first hole filled with ZOE as a control, second hole filled with ZOEP and the last hole filled with ZOP. The media plates were incubated for 24 hour, at 37°C. Antimicrobial activity was determined by measuring the diameters of polymicrobial growth inhibition zones. The data were analyzed by independent T-test statistically. There were significant differences of inhibition zones between ZOE, ZOEP and ZOP (p<0.05). The conclusion of this study is the ZOP had been stronger antimicrobial activity against polymicrobial in necrotic primary molars root canals than ZOEP and ZOE.

Key words : antimicrobial activity, propolis, zinc oxide, eugenol